Tuberculosis
is a communicable disease that is spread through airborne respiratory secretions.

What is tuberculosis?

Tuberculosis (TB) is a communicable disease that is spread in confined spaces through airborne respiratory secretions. The TB bacteria are called *Mycobacterium tuberculosis*. The TB bacteria are spread into the air in tiny droplets from the nose, mouth or lung fluid of a person with active disease when they cough, sneeze, or spit. When a person breathes in TB bacteria, they can settle in the lungs and begin to grow.

TB bacteria become active if the immune system cannot stop them from growing. The active bacteria begin to multiply in the body and may cause TB disease. Some people develop TB disease soon after becoming infected, before their immune system can fight the TB bacteria. Other people may get sick later, when their immune system becomes weak for some reason. §§

Except under unusual circumstances, TB is not highly contagious and generally requires prolonged or intense exposure to cause disease. TB is not usually spread by brief contact in large, spacious areas, or by handling the bed sheets, books, furniture, or eating utensils of a person who has the disease. When a person is infected, TB generally affects the lungs causing cough, chest pain, infected sputum that may be blood tinged, fever, weight loss, and abnormal chest x-ray. More rarely, the TB germ can cause disease in other body organs.[21, 22]

Some people are more likely to be exposed to TB, including:

- those who have spent time with a person who is known or suspected to have TB disease,
- individuals who have HIV infection or another condition that increases the risk for TB disease,
- individuals from countries where TB is more common (most countries in Latin America and the Caribbean, Africa, Asia, Eastern Europe, and Russia),
- individuals who are injecting drug users, and
- persons in long-term residential settings such as homeless shelters, nursing homes, drug-treatment centers, health care clinics, jails, and prisons.

Why is TB an important health issue for Detroiters?

TB can be prevented and cured. It is often thought to be a "disease of the past" that no longer threatens community health today. However, TB is still a problem; more than 16,000 cases were reported in 2000 in the United States.[23] Since TB can be contagious, even a small TB caseload in a population is a health concern.

§§ According to the CDC, people with weak immune systems include babies and young children, people living with HIV, and those with other conditions, such as: substance abuse, diabetes, silicosis, cancer of the head or neck, leukemia or Hodgkin's disease, severe kidney disease, low body weight, and certain medical treatments (such as corticosteroid treatment or organ transplants).

Latent TB infection is a condition in which TB bacteria are alive but inactive in the body. Some people who have latent TB infection are more likely to develop TB disease than others and are at high risk. They include:

- people with HIV infection,
- people who became infected with TB bacteria in the last 2 years,
- babies and young children,
- people who inject drugs,
- people who are sick with other diseases that weaken the immune system,
- elderly people,
- and people who were not treated correctly for TB in the past.

People with latent TB infection have no symptoms, do not feel sick, cannot spread TB to others, and usually have a positive skin test reaction. Still, they may develop TB disease if they do not receive treatment for latent TB infection. Once identified, persons with latent TB infection can take special medication to prevent them from developing active TB disease.

TB in Detroit

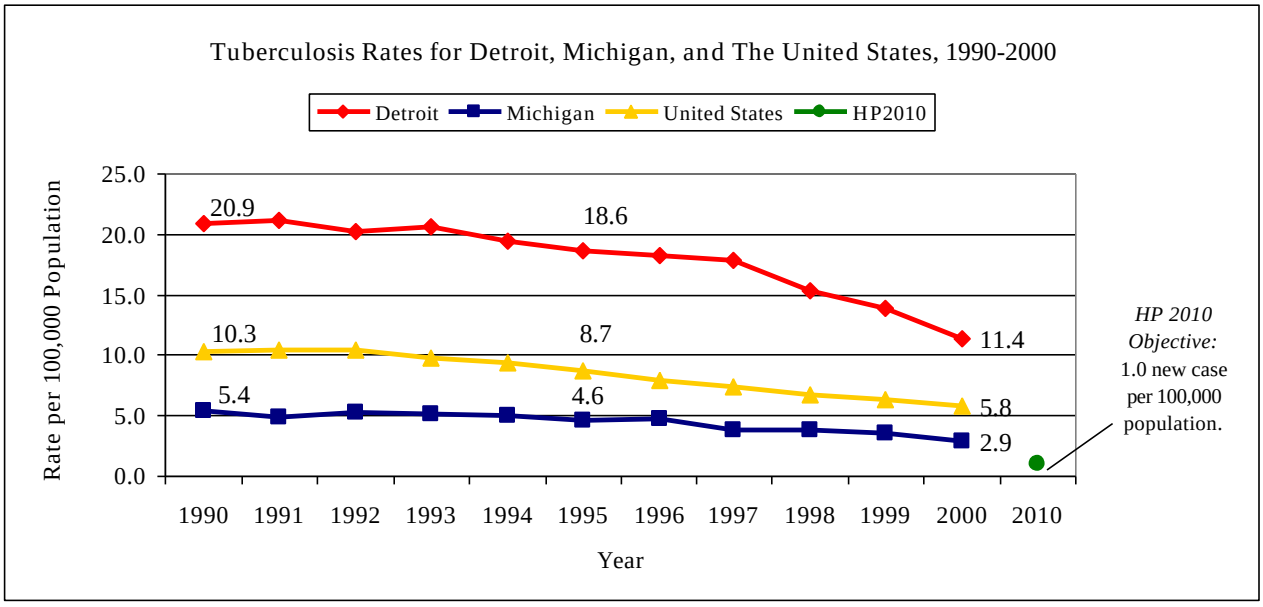

Figure 10

The three-year average TB rate for 1997-1999 was 3.8 in Michigan and 15.3 in Detroit (per 100,000 residents).[24] Throughout the nineties, Detroit accounted for a large proportion of Michigan's TB cases. Local cases peaked in 1991, when 47.9% of 451 reported TB cases in Michigan were Detroit residents. This percentage fluctuated throughout the decade, again rising to 46.8% of 374 Michigan cases in 1998. In 1998 and 1999, Detroit residents accounted for 38% of those cases.

As shown in Figure 10, the 2000 rate of TB for Detroit was 11.4 per 100,000 residents, while the state and national rates were 5.8 and 2.9 cases per 100,000 respectively. There were 287 Michigan cases of TB reported in 2000 including 108 Detroit cases.[***, †††, 25] *HP2010* seeks the reduction of new TB cases to 1.0 per 100,000 in population by the year 2010.

[***] TB data represent reported cases only and must be interpreted in light of reporting practices. According to the Michigan Department of Community Health, the degree and completeness of reporting by physicians, hospitals and clinical laboratories to health departments varies significantly. It is likely that the number of cases reported under-represents the true incidence of disease.

[†††] There are about 409 persons living in Michigan who are known to be co-infected with HIV and TB. Seventy percent of them (285) are Detroit residents. For more information, please see the HIV section of the *Profile* .